RECLAMATION
Managing Water in the West

FINDING OF NO SIGNIFICANT IMPACT

Antelope Valley Water Bank Initial Recharge and Recovery Facility Improvement Project

FONSI-09-112

Recommended by:

Michael Inthavong
Natural Resources Specialist
South-Central California Area Office

Date: 2/25/2010

Concurred by:

Mike Kinsey
Acting, Supervisory Natural Resources Specialist
South-Central California Area Office

Date: 02/25/2010

Concurred by:

Laura Myers
Chief, Resources Management Division
South-Central California Area Office

Date: 02/25/2010

Approved by:

Deputy Area Manager
South-Central California Area Office

Date: 02/25/2010

U.S. Department of the Interior
Bureau of Reclamation
South-Central California Area Office

January 2010

Introduction

In accordance with section 102(2)(c) of the National Environmental Policy Act of 1969 (NEPA), as amended, the South-Central California Area Office of the U.S. Bureau of Reclamation (Reclamation), has determined that the approval to partially fund Semitropic-Rosamond Water Bank Authority's (SRWBA) Antelope Valley Water Bank (AVWB) improvement project is not a major federal action that would significantly affect the quality of the human environment and an environmental impact statement is not required. This Finding of No Significant Impact (FONSI) is supported by Reclamation's Final Environmental Assessment (EA) number EA-09-112, *Antelope Valley Water Bank Recharge and Recovery Improvement Project*, and is hereby incorporated by reference.

Reclamation provided the public with an opportunity to comment on the draft FONSI and draft EA from February 5, 2010 through February 24, 2010 and did not receive any comments.

Background

The American Recovery and Reinvestment Act (Recovery Act) of 2009 is a bill signed into law by President Barack Obama on February 17, 2009 in an effort to jumpstart the nation's economy, create and/or save jobs, and foster unprecedented levels of accountability and transparency in government spending. The Department of the Interior has been tasked with managing $3 billion in investments as part of the Recovery Act, of which Reclamation will devote $260 million for projects in the State of California to expand water supplies, repair aging water infrastructure, and mitigate the effects of a devastating drought that the State is currently experiencing. Through a Challenge Grant, Reclamation provides 50/50 cost-share using Recovery Act funds for approved projects focused on water conservation, efficiency, and marketing.

SRWBA applied for and was selected as a potential recipient to receive a Recovery Act-funded Challenge Grant to help with the construction of improvements to their Antelope Valley Water Bank (Proposed Action). The Proposed Action will consist of improvements to an existing 160-acre recharge basin by building up the levees, development of a new 160-acre recharge basin, a new turnout, and the installation of up to nine recovery wells with associated pipelines.

Findings

Water Resources

The Proposed Action will not generate a new supply of water; rather, it will improve the reliability of Antelope Valley and the region's water resources by recharging available surplus surface water for later use when groundwater pumping is necessary. The Proposed Action does not include additional groundwater pumping; therefore, it will not contribute to ground subsidence and water-level impacts associated with groundwater pumping. Banking participants will be required to leave behind ten percent of its stored water in the groundwater basin for recharge. There will be no adverse impacts to water quality since the quality of State Water Project supplies and that of the groundwater are similar. The Proposed Action will improve the overall groundwater basin and improve water resources management in the Antelope Valley region. Therefore, the Proposed Action will have slight beneficial impacts to water resources.

Land Use

The Proposed Action will involve approximately 160 acres of farmland being converted into a water bank. When not being used for recharge, the basins will be used for organic farming a minimum of 8 months out of the year. Recovery wells and recharge basins are considered to be related uses for agriculture and is therefore compatible within agricultural preserves established under the Williamson Act contract. Therefore, the Proposed Action will have no significant impacts to land use.

Biological Resources

The Proposed Action could have temporary and permanent impacts on biological resources in the project area. Temporary impacts could occur during the construction period, and will be within temporary equipment staging and equipment movement areas and the alignment of the new delivery pipeline. The potential for impacts to wildlife and special-status species will be limited, since the project will be largely constructed within the existing recovery wells and associated pipelines.

Reclamation has determined that the Proposed Action will have No Effect to listed species and critical habitats designated under the Endangered Species Act (ESA), and no consultation with the United States Fish and Wildlife Service (USFWS) is required. Preconstruction surveys will be conducted before any ground-disturbing activities are to begin. If the surveys detect the presence of listed species, then the Proposed Action will be paused while Reclamation revisits the ESA determination and completes any consultation with the USFWS that might be necessary.

If preconstruction surveys find that no special-status species are present within the project area, then Reclamation's determination remains and the project could move forward. By following Environmental Protection Measures listed in the EA, this will avoid or minimize any potential impacts to burrowing owl, Swainson's hawk, and other listed species during construction. Therefore, the Proposed Action is anticipated to have no significant impacts on biological resources.

Cultural Resources

The Proposed Action involved activities that include excavation and these actions have the potential for impacts to historic properties. Identification efforts were conducted and revealed that no historic properties were present within the project footprint. Reclamation, therefore determined that the proposed action would result in no historic properties affected. The State Historic Preservation Officer concurred with this finding on January 26, 2010. In the unlikely event that project implementation revealed previously unidentified cultural resources, then procedures outlined at 36 CFR Part 800.13(B) will be followed to ensure that there will be no significant impacts.

Indian Trust Assets (ITA)

There are no tribes possessing legal property interests held in trust by the United States in the lands involved with the Proposed Action, the nearest ITA is a Public Domain Allotment approximately 36 miles north/northeast of the project location. The Proposed Action will have no significant impacts to ITA.

Socioeconomic Resources
Over the long term, the Proposed Action will facilitate an increase in the reliability of the region's surface water supply. This will subsequently help to maintain the economic viability of irrigated agriculture within the Antelope Valley. However, the recovered water will most likely be used for municipal and industrial (M&I) purposes; therefore, the Proposed Action will have no adverse impacts on socioeconomic resources.

Environmental Justice
To the extent that water supply reliability is improved in the Antelope Valley, it will serve to support the continued viability of available M&I water to the surrounding communities. As a result, there will be beneficial impacts to environmental justice from the implementation of the Proposed Action.

Air Quality
Short-term air quality impacts will be associated with construction, and will generally arise from dust generation (fugitive dust) and operation of construction equipment. Fugitive dust results from land clearing, grading, excavation, concrete work, and vehicle traffic on paved and unpaved roads. The Proposed Action will include Environmental Protection Measures to reduce the amount of fugitive dust released from these construction activities.

Comparison of the estimated Proposed Action emissions with the thresholds for Federal conformity determinations indicate that project emissions are estimated to be below these thresholds. Therefore, there will be no significant impacts to air quality.

Global Climate Change
The Proposed Action will involve short-term impacts consisting of emissions during construction and long-term impacts are attributable to project operations and will involve the generation of electrical energy to power the electric motor pump drivers. Accordingly, project construction and operations under the Proposed Action will result in below *de minimis* impacts to global climate change.

Cumulative Impacts
It is anticipated that the AVWB will increase in size as banking partners are added until the entire project is completely built out as analyzed in the EIR. Due to the flexibility of the AVWB, it is possible to add and construct future elements as needed in a phased approach. A major consideration in the development of the project is to provide the operational flexibility to meet the needs of the future banking partners. The changing conditions of California water supplies help to dictate the flexibility required to maintain and develop the rest of the AVWB. Aside from the two existing water bank users, other potential banking partners are speculative at best.

The Proposed Action will improve water resources management in the region by increasing the absorption of available water supplies, particularly during "wet-years". The long-term operation of the AVWB will result in a cumulative positive impact on groundwater levels by contributing to the protection of the local aquifer from overdraft. The AVWB operation allows for 10 percent of banked water to remain in the Antelope Valley groundwater basin which is a positive contribution to the underlying aquifer and ground subsidence throughout the region.

At full build-out, the AVWB will encompass an 18-square mile area totaling roughly 13,440 acres, of which 1,482 acres would be dedicated for spreading basins. The remaining property will continue to be farmed as has historically occurred and will not be disturbed. Operation flexibility of the AVWB will allow basins to be rotated: while not being used for recharge, the remaining basins will be farmed as has historically occurred. The development of recovery wells and recharge facilities is considered to be an incidental agricultural use; therefore, there will be no cumulative adverse impacts to land use.

The full build-out of the AVWB project, of which the Proposed Action is a part of, was analyzed and found that air quality impacts will result from the construction and operation of the project over two separate phases. At best, each phase could be completed within a single year; however, the second phase of the project will not be able to start before the completion of the first phase. Annual construction and operation emissions for each phase of the overall AVWB project were still estimated to be well below the Federal thresholds. Therefore, the Proposed Action will not contribute to cumulative adverse impacts to air quality.

Greenhouse gas impacts are considered to be cumulative impacts. Full build-out of the overall AVWB project could contribute to global climate change impacts due to emissions of CO_2 from project operations. However, the estimated CO_2 emissions from annual generation of electricity required to operate every proposed well for the AVWB project is still well below the 25,000 metric tons per year threshold for reporting GHG emissions. As a result, the Proposed Action is not expected to contribute to cumulative adverse impacts to global climate change.

Inthavong, Michael T

From: Overly, Stephen A
Sent: Tuesday, February 09, 2010 9:19 AM
To: Inthavong, Michael T
Cc: Barnes, Amy J; Bruce, Brandee E; Goodsell, Joanne E; Leigh, Anastasia T; Nickels, Adam M; Ramsey, Dawn
Subject: 09-SCAO-336 ARRA Project - Section 106 Complete
Attachments: 09-SCAO-336_CASHPO_Concurrence.pdf

Project Name: AVWB Initial Recharge and Recovery Facility Improvements Project
CR Tracking #:09-SCAO-336
Location:

Michael,

The proposed undertaking to provide federal appropriations to the Semitropic-Rosamond Water Bank Authority (STR) through the American Recovery and Reinvestment Act (ARRA) for construction of the Antelope Valley Water Bank Initial Recharge and Recovery Facility Improvement Project (Project) in Kern County was determined to be the type of action that had the potential to affect historic properties. As a result, Reclamation entered into consultation with the California State Historic Preservation Office (SHPO) on a finding of no historic properties affected pursuant to the regulations at 36 CFR Part 800.4(d)(1).

At full build-out, the Antelope Valley Water Bank (AVWB) will be a groundwater banking program designed to provide up to 500,000 acre-feet of total surface water storage capacity underground in a partially depleted aquifer. At present only a portion of the AVWB has been built. The current Project activities will improve existing infrastructure and also add new elements to the AVWB. The new elements will be integrated into the larger bank but also could function as a separate independent entity. Specific Project actions include construction of four recovery wells, pipelines, a turnout from the Antelope Valley East Kern (AVEK) West Feeder, a new recharge basin, and modification to an existing basin. The pipelines would consist of various size diameter conveyances (about one mile of 54-inch diameter pipe, one mile of 48-inch diameter pipe, one-half mile of 36-inch diameter pipe). Smaller collection pipelines would also be installed and consist of three quarters of a mile of 18-inch and one-half mile of 30-inch diameter pipe. In the event, that ARRA funding is not fully utilized by the above actions, an additional five provisional well locations have been located along the same proposed alignment.

Consulting archaeologists hired by STR conducted a record search at the regional information center and completed a pedestrian survey of the area of potential effects (APE) in September 2009 and January 2010. The identification efforts were done in support of National Historic Preservation Act compliance and disclosed only one cultural resource within the current APE. The resource is a single sparse scatter of historic and modern debris accompanied by an older abandoned well and a newer well located within the new proposed recharge basin.

Based in part on the findings of the consultant's report, Reclamation concluded that Site AV-1 was not eligible for inclusion in the National Register as an eligible property and that the Project would result in no historic properties affected, pursuant to 36 CFR Part 800.4(d)(1).

Reclamation submitted the report to the California State Historic Preservation Officer (SHPO) on January 25, 2010 seeking concurrence on a finding of no historic properties affected. In a letter dated January 26, 2010 and received at Reclamation on January 29, 2010, SHPO concurred with Reclamation's finding that the project would result in no historic properties affected (attached).

After receiving the SHPO concurrence on Reclamation's findings, the Section 106 process has been completed. Please retain a copy of this e-mail memo with the Administrative Record of the EA for this project. I have already provided comments on the draft EA under separate cover. Please note that if project plans or actions change, this may require additional Section 106 consideration including consultation with the SHPO.

STATE OF CALIFORNIA – THE RESOURCES AGENCY ARNOLD SCHWARZENEGGER, *Governor*

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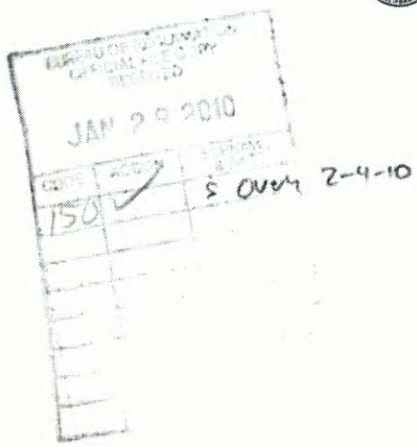


January 26, 2010

In Reply Refer To: BUR100125D

Michael A. Chotkowski
Regional Environmental Officer
United States Department of the Interior
Bureau of Reclamation
Mid-Pacific Regional Office
2800 Cottage Way
Sacramento, CA 95825-1898

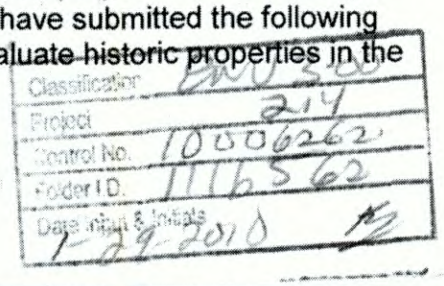
Re: Antelope Valley Water Bank Initial Recharge and Recovery Facility Improvement Project, Kern County, California (Project No. 09-SCAO-336).

Dear Mr. Chotkowski:

Thank you for consulting with me regarding the above noted undertaking. Pursuant to 36 CFR Part 800 (as amended 8-05-04) regulations implementing Section 106 of the National Historic Preservation Act (NHPA), the Bureau of Reclamation (BUR) is the lead Federal agency for this undertaking and is seeking my comments on the effects that the proposed project will have on historic properties. The BUR is proposing to provide funds from the American Recovery and Reinvestment Act (ARRA) to the Semitropic-Rosamond Water Bank Authority (STR) for construction of the Antelope Valley Water Bank Initial Recharge and Recovery Facility Improvement Project (AVWB). The BUR has identified this use of federal funds as an undertaking subject to review under the Section 106 regulations.

The AVWB, as planned, will consist of a groundwater water banking facility that will be able to store 500,000 acre-feet of water in an underground, partially depleted aquifer. Only a portion of the AVWB has been built to date. The subject undertaking will consist of the construction/installation of additional facilities and the improvement of some existing facilities, including: construction of new recovery wells (4 to 9), new pipelines, a new turnout, a new recharge basin, and the modification of an existing recharge basin.

The BUR has determined that the area of potential effects (APE) consists of an area of 305 acres within the larger AVWB facility that will be affected by the subject undertaking. The major effect from the proposed new construction is the excavation of from 4-5 feet of soil from the existing recharge basin and the proposed new recharge basin. In addition to your letter of January 25, 2010, you have submitted the following documents as evidence of your efforts to identify and evaluate historic properties in the APE:



• *Archaeological Evaluation Report for the Antelope Valley Water Bank Project, Kern and Los Angeles Counties, California* (Jones & Stokes: October 2005).

• *Antelope Valley Water Bank Initial Recharge and Recovery Facility Improvement Project, Kern County, California: Cultural Resources Assessment* (GEI Consultants, Inc.: January 2010).

Identification efforts by the BUR conclude that only one cultural resource, consisting of a sparse scatter of historic and recent debris and refuse in association with an abandoned well and a newer well is located within the APE. The BUR has applied the National Register of Historic Places four criteria for eligibility and concluded that this site, recorded under the field # AV-1, is not eligible for the NRHP under any criteria. I concur with this determination. As AV-1 is the only cultural resource identified in the APE, the BUR has concluded that a finding of No Historic Properties Affected is appropriate pursuant to 36 CFR Part 800.4(d)(1).

After reviewing your letter and supporting documentation, I have no objection to your finding of No Historic Properties Affected. Be advised that under certain circumstances, such as unanticipated discovery or a change in project description, the BUR may have additional future responsibilities for this undertaking under 36 CFR Part 800. Thank you for seeking my comments and for considering historic properties in planning your project. If you require further information, please contact William Soule, Associate State Archeologist, at phone 916-654-4614 or email wsoule@parks.ca.gov.

Sincerely,

Susan K Stratton for

Milford Wayne Donaldson, FAIA
State Historic Preservation Officer

Inthavong, Michael T

From: Rivera, Patricia L
Sent: Wednesday, January 27, 2010 3:50 PM
To: Inthavong, Michael T
Subject: RE: ITA Request (EA-09-112)

Michael,

I reviewed the proposed action to award the Semitropic-Rosamond Water Bank Authority with a Recovery Act-funded Challenge Grant. The scope of the Project includes:

- Installation of four new recovery wells (with up to potentially five more) wells along the Project's proposed alignment;
- construction of a new recharge/recovery basin on 160 acres (with associated berms/levees);
- approximately 3.75 miles of transmission/recovery pipeline from the Project Location to the Antelope Valley East Kern West (AVEK) Feeder pipeline; and a new turnout from the AVEK West Feeder.

The proposed action does not impact Indian Trust Assets. The nearest ITA is a Public Domain Allotment approximately 36 miles NNE of the project location.

Patricia

1. Background

Semitropic-Rosamond Water Bank Authority (Authority) proposes the Antelope Valley Water Bank Initial Recharge and Recovery Facility Improvement Project (Project), located at the west end of the Antelope Valley in Kern County, California (Fig. 1). The proposed project area is approximately 21 square mile area, bounded by Rosamond Boulevard on the north, Avenue A to the south, 170th Street West to the west and 100th Street West to the east (Fig. 2). The Project would implement and use water markets and water banks, as a mechanism to make water available to meet existing and future water supply needs to Antelope Valley and other regions of southern California. This Project would include the addition of new recharge and recovery facilities.

The proposed project is an independent part of a larger project, known as the Antelope Valley Water Bank Project (Kern County 2006; Water Bank), and is designed to provide up to 500,000 acre-feet of total surface water storage capacity underground in a partially depleted aquifer. The Water Bank will leave behind 10% of all imported surface water. Therefore, the Project will improve the overall basin water balance and help to reduce historical ground water level declines in the Antelope Valley Region. In addition, the Project is recognized as having regional significance, and has been identified in the Antelope Valley Integrated Regional Management Plan (AV IRWMP 2007), as a high priority water supply groundwater and recharge infrastructure project.

2. Description of the Proposed Action

This Project will have three phases. The first phase will have a pipeline and turnout added to the Antelope Valley East Kern (AVEK) West Feeder (Fig. 2), and one well constructed. The pipeline would be one mile of 48-inch and one mile of 54-inch diameter pipe. This would provide increased delivery to existing recharge basins and the well would provide a delivery mechanism of banked water to the West Feeder.

The second phase includes construction of additional recharge basins connected to the pipeline to allow greater recharge potential for storage. The pipeline would be extended to reach the top of the recharge basins with a one-half mile 36-inch diameter pipe. An additional well will be constructed near the pipeline to return water to the West Feeder.

The third phase of the Project will include the construction of two more wells. These wells will need to be connected to the West Feeder by means of a pipeline constructed of three-fourth mile of 18-inch and one-half mile of 30-inch diameter connection lines.

Construction of the recharge basins and pipelines would temporarily disturb approximately 1,672 acres of Important Farmlands. The construction of the recharge basins is expected to take 6 months, and construction of the pipelines is expected to take 6 to 12 months (Kern County 2006).

3. Affected Environment

The Project is located within the western Antelope Valley Region of the Mojave Desert. The valley is bounded by the San Gabriel Mountains to the south and southwest, the Tehachapi Mountains to the northwest, and a series of hills and buttes that generally

follow the Eastern border. The valley is characterized as a semiarid region with precipitation generally less than 10 inches per year and average summer temperatures ranging from 63 degrees Fahrenheit (°F) to 93°F, and winter temperatures range from 34°F to 57°F (AV IRWMP 2007).

Habitat types for the Project area include annual grasslands, rabbitbursh scrub, and ephemeral drainage, however much of the area is cultivated lands. The dominant crops are primarily carrots in addition to grain and alfalfa. The valley has 1,400 acres of deciduous orchards, most of which are peaches.

4. Special Status Species

The Ventura USFWS's Database: http://www.fws.gov/ventura/speciesinfo/spplists/sl_kern_co.cfm, was accessed February 4, 2010, to determine federal protected species known or with the potential to occur in Kern County (USFWS 2010). Reclamation further queried the California Natural Diversity Database (CNDDB) for records of protected species within 10 miles of the project location (CNDDB 2010). The two lists, in addition to other information within Reclamation's files were combined to create the following list (Table 1).

Table. 1. Special status species that could potentially occur within affected area.

Species	***Status[1]***	***Effects[2]***	***Occurrence in the Study Area[3]***
Birds			
California Condor (*Gymnogyps californianus*)	E , X	NE	**Absent**. No individuals or habitat in area of effect.
Least Bell's Vireo (*Vireo bellii pusillus*)	E	NE	**Absent**. No individuals or habitat in area of effect.
Southwestern Willow Flycatcher (*Empidonax trallii extimus*)	E	NE	**Absent.** No individuals or habitat in area of effect. Disturbed agricultural lands do not provide habitat.
Swainson's hawk (*Buteo swansoni*)	MBTA	NE	**Possible**. Individuals and habitat occur within Little Buttes Quad.
Western burrowing owl (*Athene cunicularia hypugaea*)	MBTA	NE	**Present**. CNDDB[4] records indicate species occurs within Fairmont Butte and Little Buttes Quads.
Yellow-Billed Cuckoo (*Coccyzus americanus*)	C, MBTA	NE	**Absent**. No individuals or habitat in area of effect.
Reptiles			
Desert Tortoise Gopherus agassizzii	T , X	NE	**Absent**. No individuals or habitat in area of effect.

1 Status= Listing of Federally special status species, unless otherwise indicated
E: Listed as Endangered
MBTA: Protected by the Migratory Bird Treaty Act
T: Listed as Threatened
X: Critical Habitat designated for this species
C: Candidate - Candidate to become a proposed species
2 Effects = Effect determination.
NE: No Effect
3 Definition Of Occurrence Indicators
Present: Species recorded in area and habitat present
Possible: Reports from greater than 10 years ago and any habit present of suboptimum quality
Absent: Species not recorded in study area and/or habitat requirements not met
4 CNDDB = California Natural Diversity Database 2010

Western burrowing owl. This small, ground-dwelling owl is a yearlong-resident protected by the Migratory Bird Treaty Act (MBTA). The burrowing owl exhibits high site fidelity and lives in ground squirrel and other mammal burrows that it appropriates and enlarges for its purposes. This owl is typically found in short-grass grasslands, open scrub habitats, and a variety of open, human-altered environments, such as golf courses, airport runways and agricultural fields. They are active day and night and are opportunistic feeders, and their diet includes insects, amphibians, reptiles, small mammals, and grass material. Burrowing owl nesting season occurs from Feb. 1 - Aug. 31 (CDFG 1995).

Burrowing owls have shown significant declines throughout California in recent years due principally to the conversion of grassland and pasturelands to agricultural and urban uses, and to poisoning programs to control California ground squirrels (*Spermophilus beecheyi*). Other hazards common to agricultural areas in California that could impact burrowing owls include automobiles, barbed-wire fences, and electric fences (Gervais et al. 2008).

CNDDB records indicate this species is near the Project area. The closest observation (~2.5 mile) was reported in Fairmont Buttes Quad in Sept. 2007 (CNDDB 2010). Individuals present in agricultural lands will utilize cropland for foraging habitat (Gervais et al. 2000, York et al. 2002); therefore this species could be in the Project area.

Swainson's hawk. This migratory bird is protected under MBTA. Historically, they were found throughout North America but populations now have been largely reduced to Sacramento and San Joaquin valleys and northeast California (Bloom 1980). They begin to arrive to their breeding grounds in the Central Valley from late February to early March. This species spends large amounts of time soaring over grasslands and agricultural fields in the Central Valley and can travel up to 29 km to forage for prey (Estep 1989). Swainson's hawks prey on small mammals, insects, and birds. They have adapted to the use of some croplands, predominantly alfalfa, but also grain, tomatoes, beets and other row crops for foraging (Estep 1989).

The nesting season is from March 1 – September 15. Nests are constructed in trees, and include Fremont cottonwood (*Populus fremontia*), willow (*Salix* spp.), Valley Oak

(*Quercus lobata*), eucalyptus (*Eucalyptus* spp), and Joshua tree (*Yucca brevifolia*) (Bloom 1980). They exhibit a high degree of nest site fidelity, and will return to the same tree for many years (Estep 1989). Home range for this species largely depends on season and land cover and quality, but typically ranges from approximately 336 - 8,718 ha (Estep 1989). The largest threats to this species include fragmentation of their foraging and nesting habitat (CDFG 1994).

There are two records that indicate this species in Little Buttes quad approximately a mile from the Project Site (CNDDB 2010). A nest was observed in June of 2005 containing 2 adults and 1-2 young in a yard with ornamental trees and grasses. The second record also contained a nest with both adults reported June of 2005 and located in an alfalfa field next to fallow agricultural field. As a result, Swainson's hawk may be affected as a result of the proposed action.

5. Critical Habitat

The Proposed Action does not fall within designated or proposed critical habitat for any of the federal listed wildlife species identified by the USFWS.

6. Biological Commitments

The Authority would implement the following environmental protection measures to reduce environmental consequences associated with the Proposed Action (Table 2). Environmental consequences for resource areas assume the measures specified would be fully implemented.

Table 2. Environmental Protection Measures

Resource	Protection Measure
Biological Resources	A protocol-level preconstruction burrowing owl survey shall be conducted within 250' of areas subject to disturbance no fewer than 14 days and no more than 30 days prior to start of construction according to established guidelines (CDFG 1995). Appropriate avoidance, minimization, or protection measures shall be determined in consultation with the California Department of Fish and Game (CDFG) in the event an active nest is located in an area subject to disturbance, or within the typical setback (i.e., occupied burrows or nests within 150' of an area subject to disturbance during the non-breeding season, or within 250' of an area subject to disturbance during the breeding season (February 1 through August 31)).
Biological Resources	Preconstruction surveys for nesting Swainson's hawks shall be performed within 0.5 mi of the project area according to established protocol and implement protective measures to minimize potential effects (CDFG 1994).

Biological Resources	Areas subject to ground disturbance shall be surveyed for active nests by a qualified biologist within 15 days of the start of construction when construction is scheduled to occur during the bird nesting season (February 1 to September 30). An appropriate buffer shall be established around active avian nests in consultation with CDFG if an active avian nest is identified during nesting season (February 1 through September 30).

7. Potential Impacts

The Proposed action could have temporary and permanent impacts on biological resources in the Project area. Temporary impacts would occur only during the construction period, and would be within temporary equipment staging and equipment movement areas and the alignment of the new delivery pipeline. The potential for impacts to wildlife and special-status species would be limited, since the project would be largely constructed within the existing recovery wells and associated pipelines.

Swainson's hawk. Construction activities, such as earthmoving with heavy construction equipment occurring within the area for the proposed recharge basins could cause the failure of a Swainson's hawk nest, if a pair were nesting in the vicinity. The loss of an active Swainson's hawk nest could contribute to continuing local and statewide declines of Swainson's hawks. Because the number of Swainson's hawks that nest in the Antelope Valley is very small, the loss of even one nest could be significant because it could have a substantial adverse effect, either directly or through habitat removal, on a species identified as a migratory bird protected under the MBTA.

The Authority would retain a qualified biologist to conduct preconstruction surveys to locate all active nest sites within 0.5 mile of the construction area. If occupied Swainson's hawk nests are found, the Authority, in consultation with CDFG, shall establish a buffer zone around active Swainson's hawk nests in the vicinity of the Project area.

Western burrowing owl. The shoulders of roads, larger dirt mounds and berms, and other open areas provide suitable habitat for burrowing owls, especially where ground squirrel burrows and open culverts occur. Construction activities, such as excavation and driving off road could result in the removal of active nests, if construction occurs during the nesting season (February 1 through August 31) and occupied burrows during the non-breeding season (September 1 through January 31). Because the numbers of burrowing owls nesting in the Antelope Valley is low, the loss of one nest or one occupied burrow could be a significant impact because it could have a substantial adverse effect, either directly or through habitat removal, on a species identified as a migratory bird protected under the MBTA.

There is a very limited abundance of small mammal burrows in the area (personal observation by Reclamation Biologist on November 3, 2009), and because of the great disturbance of the site and the fact that it is surrounded by active agricultural fields, any burrowing owls present in the area would most likely be transient. However, there is the possibility that Western burrowing owl could have moved into the project area, and as

such, a qualified biologist must perform a pre-activity survey of the entire action area and standard avoidance measures must be implemented for Western burrowing owl as stated above (Table 2).

8. Conclusion

Reclamation has determined that the Propose Action would have No Effect to listed species and critical habitats designated under the Endangered Species Act (ESA), and no consultation with the USFWS is required. Preconstruction surveys would be conducted before any ground-disturbing activities are to begin. If the surveys detect the present of listed species, then the Proposed Action would be paused while Reclamation revisits the ESA determination and completes any consultation with the USFWS that might be necessary.

If preconstruction surveys find that no special-status species are present within the project area, then Reclamation's determination remains and the project could move forward. By following Environmental Protection Measures listed in Table 2, this would avoid or minimize any potential impacts to burrowing owl, Swainson's hawk, and other listed species during construction. Therefore, the Proposed Action is anticipated to have no significant impacts to biological resources.

9. References

AV IRWMP (Antelope Valley Integrated Regional Water Management Plan). 2007.

Bloom, P.H. 1980. The status of the Swainson's hawk in California, 1979. Wildlife Management Branch, Nongame Wildlife Investigations, Job II - 8.0. California Department of Fish and Game, Sacramento, CA.

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Fig. 1 Antelope Valley, California
Project Area

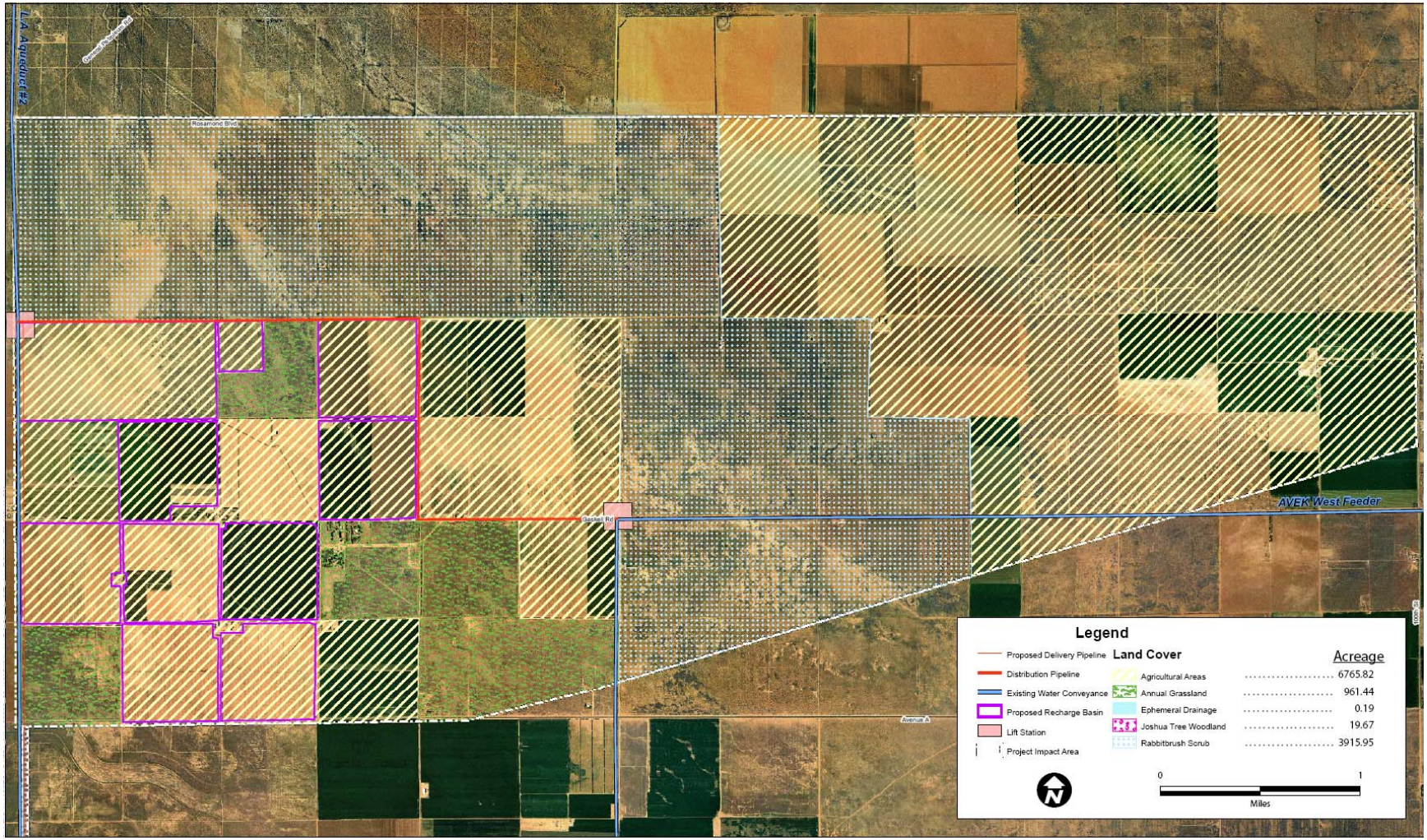

Fig. 2. Antelope Valley Water Bank Project (Taken from Kern County 2006).